

Figure 1A

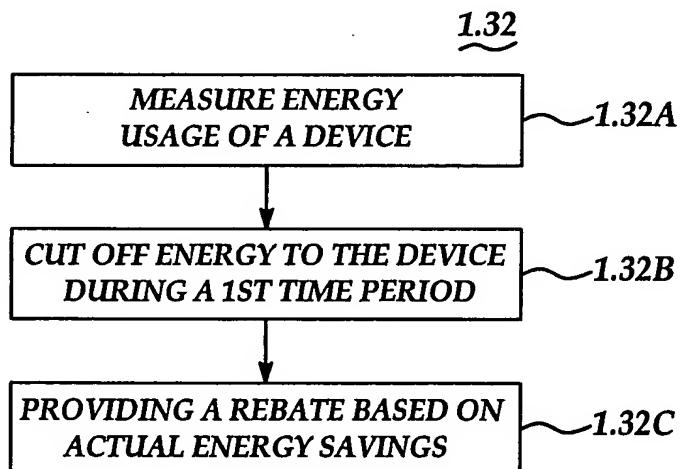


Figure 1C

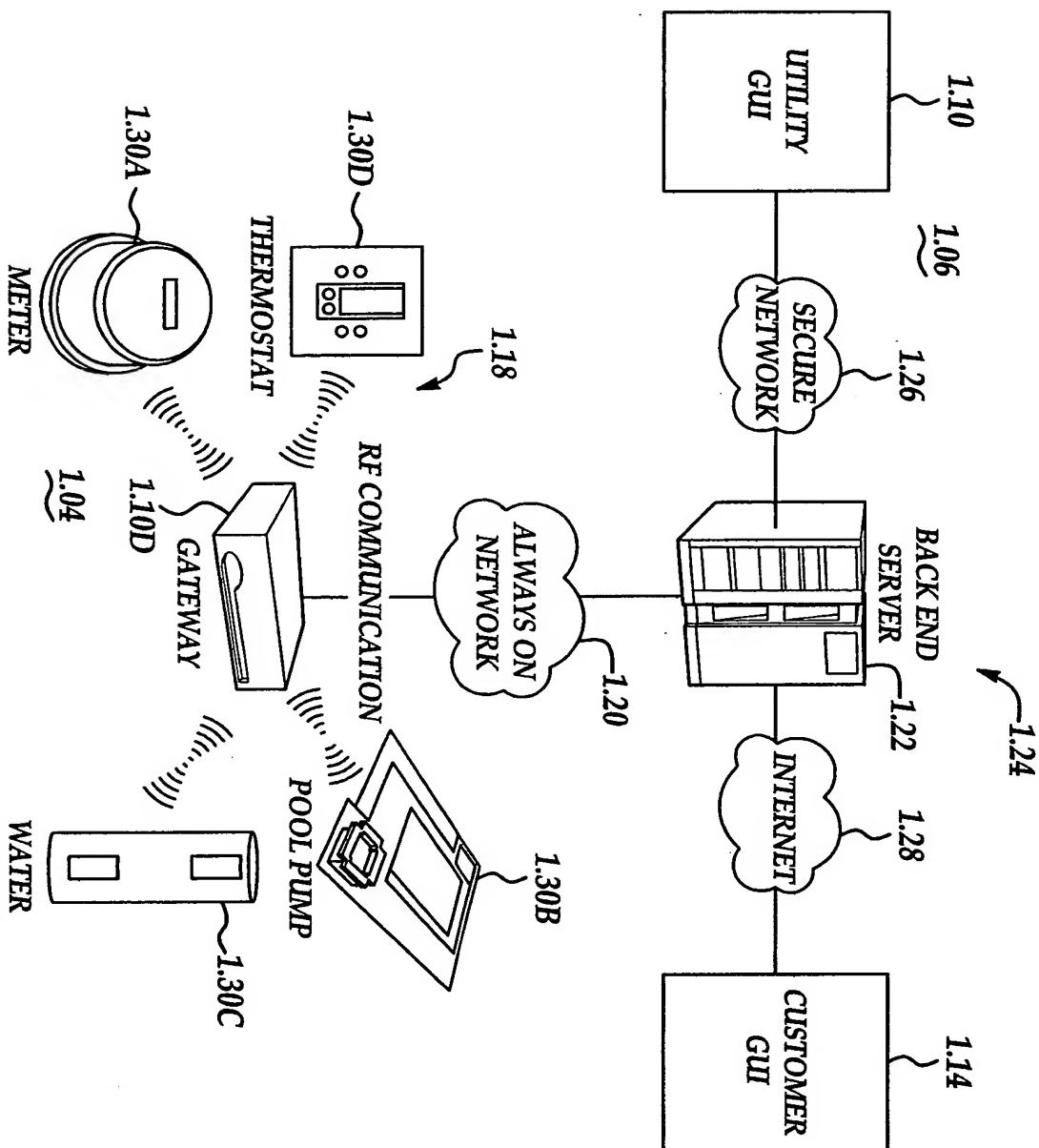


Figure 1B

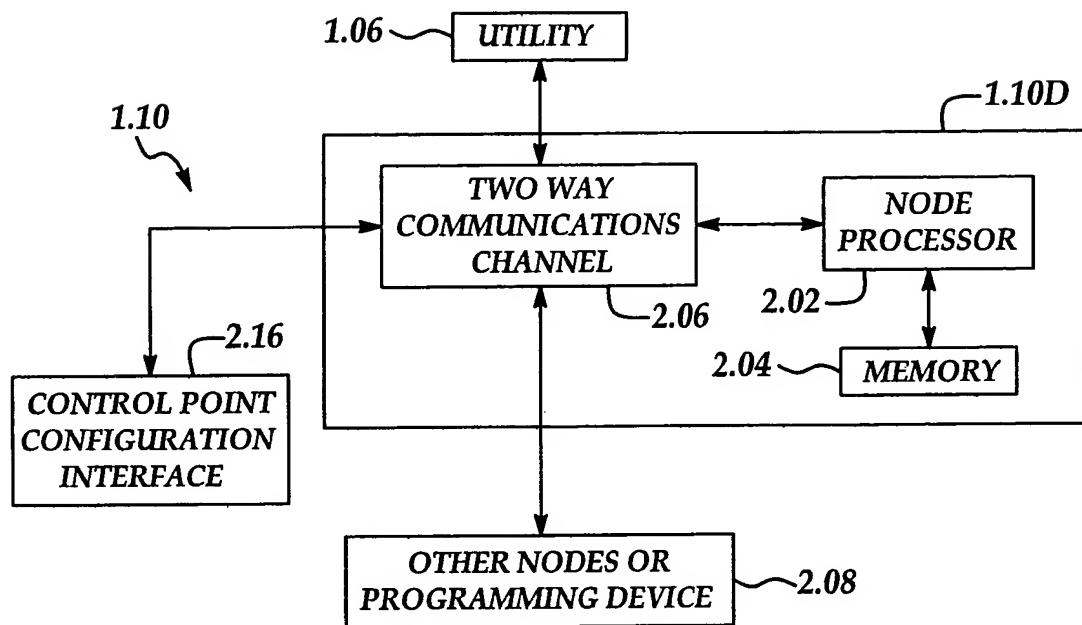


Figure 2A

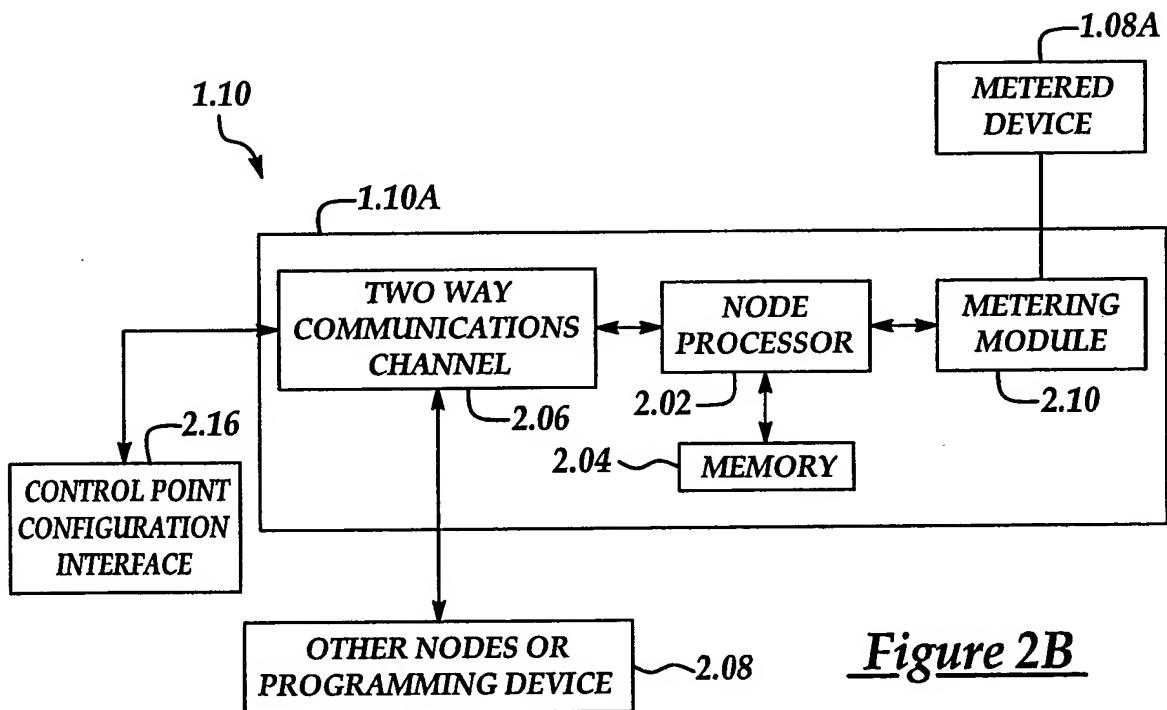
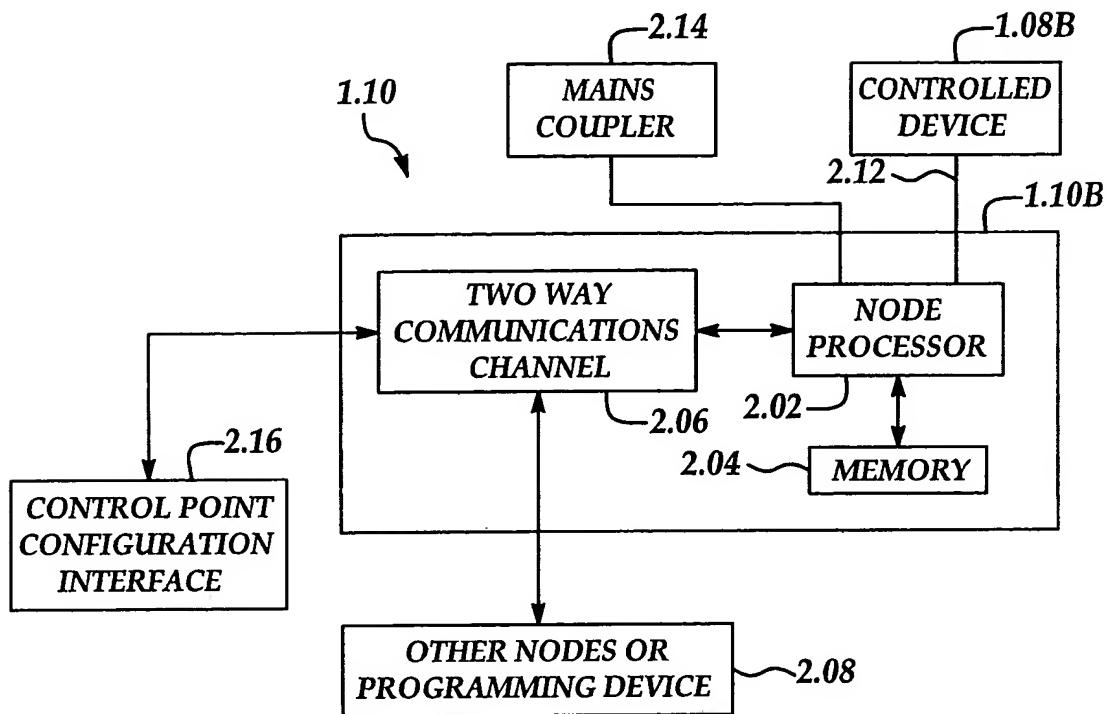
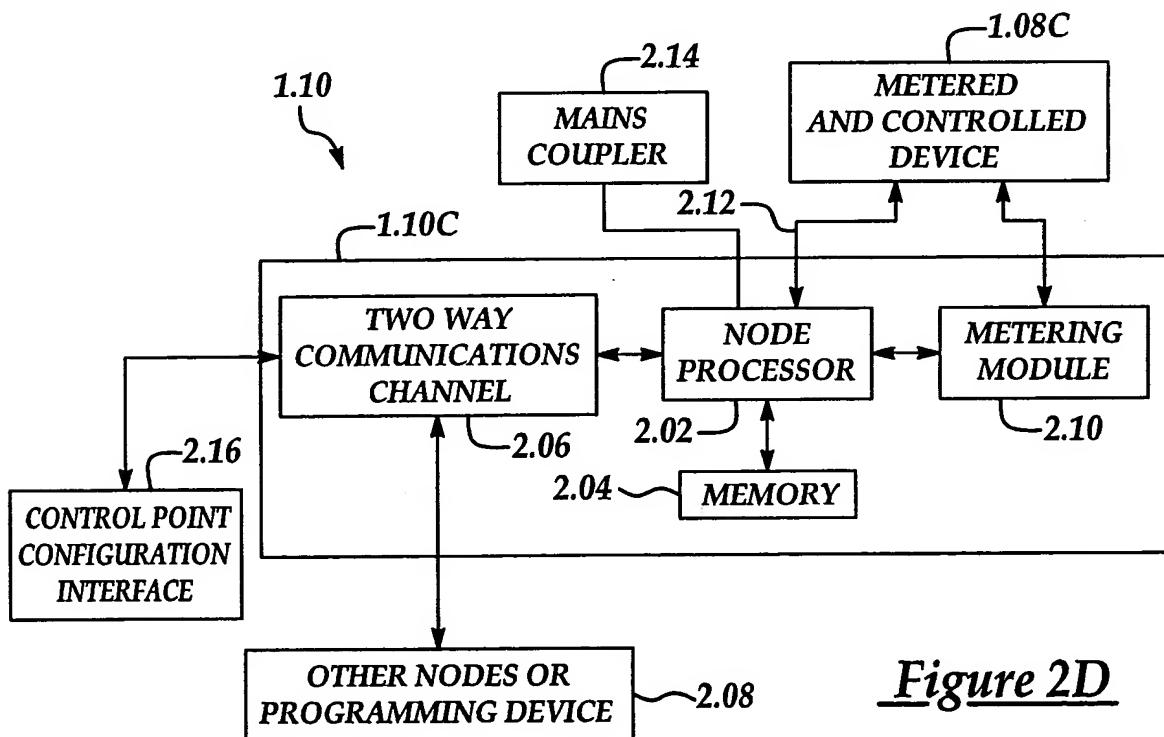


Figure 2B



*Figure 2C*



*Figure 2D*

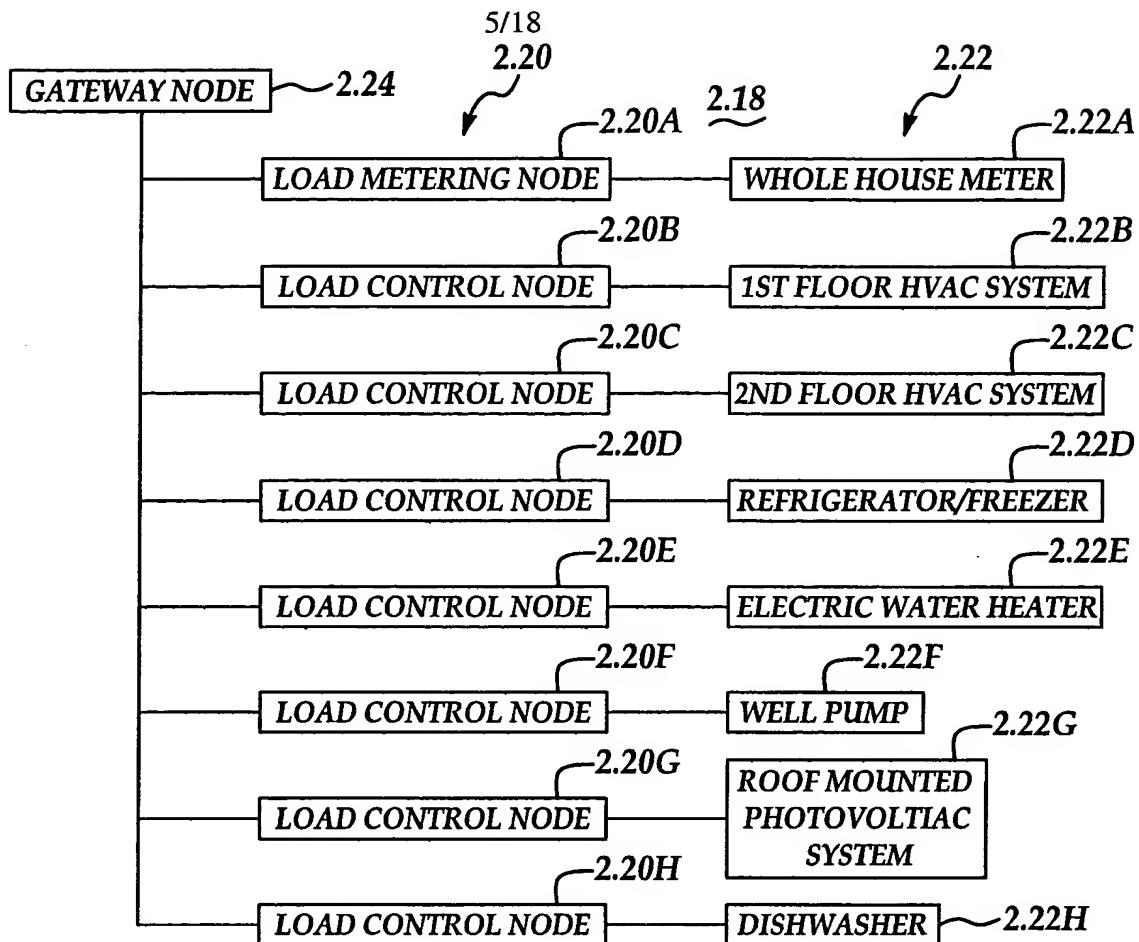


Figure 2E

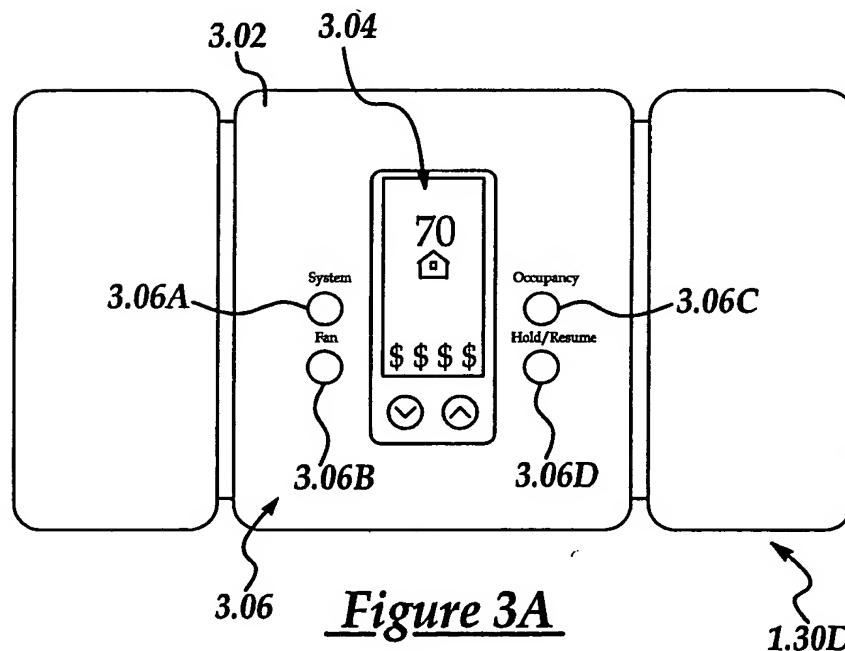


Figure 3A

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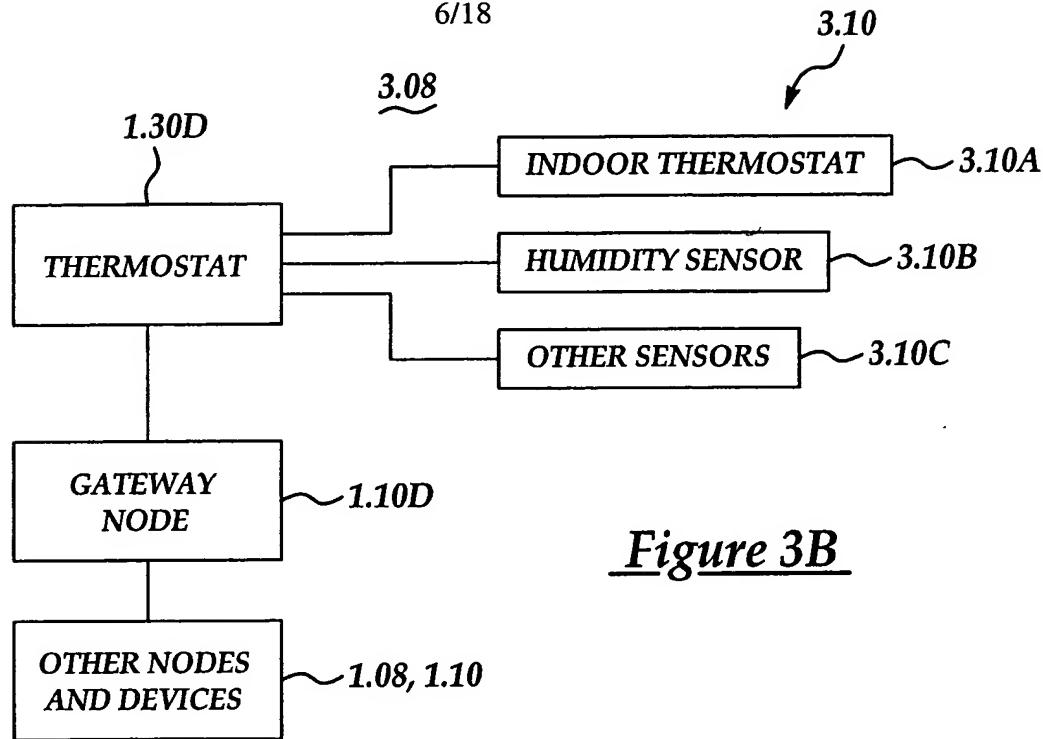


Figure 3B

ECONOMIC AND COMFORT MANAGEMENT & CONTROL EXAMPLE

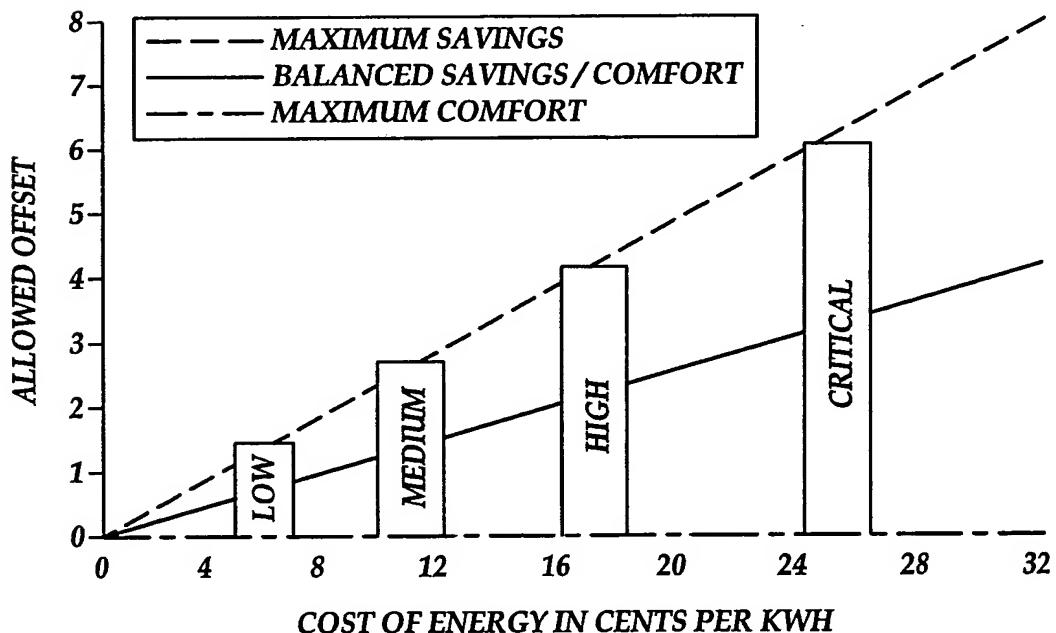


Figure 3C

ECONOMIC AND COMFORT MANAGEMENT & CONTROL EXAMPLE

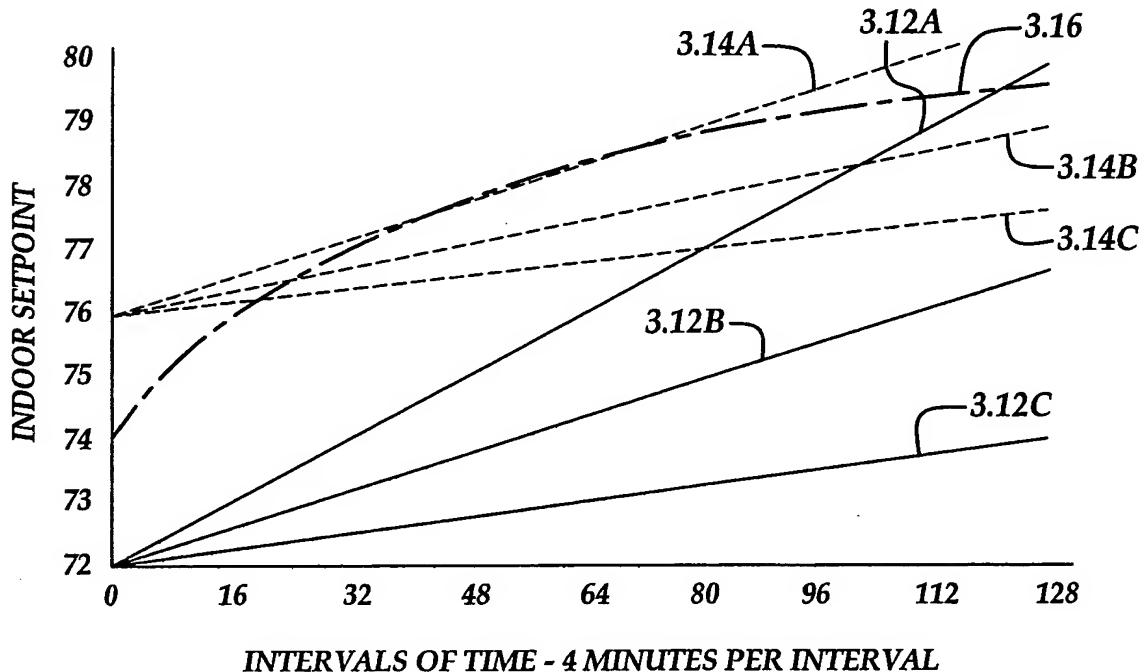


Figure 3D

ECONOMIC AND COMFORT MANAGEMENT & CONTROL EXAMPLE

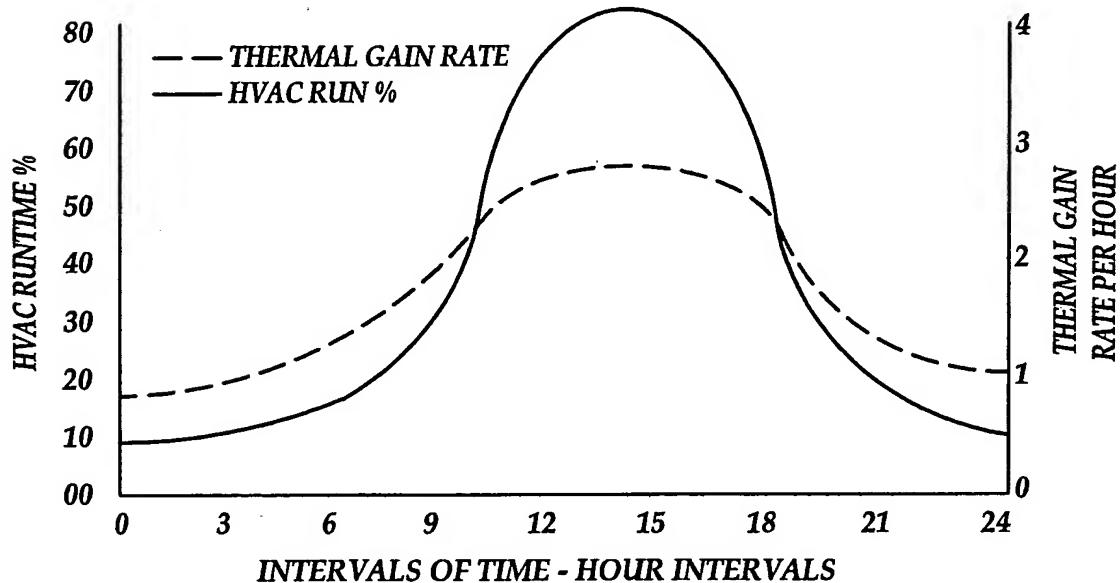


Figure 3E

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ECONOMIC AND COMFORT MANAGEMENT & CONTROL EXAMPLE

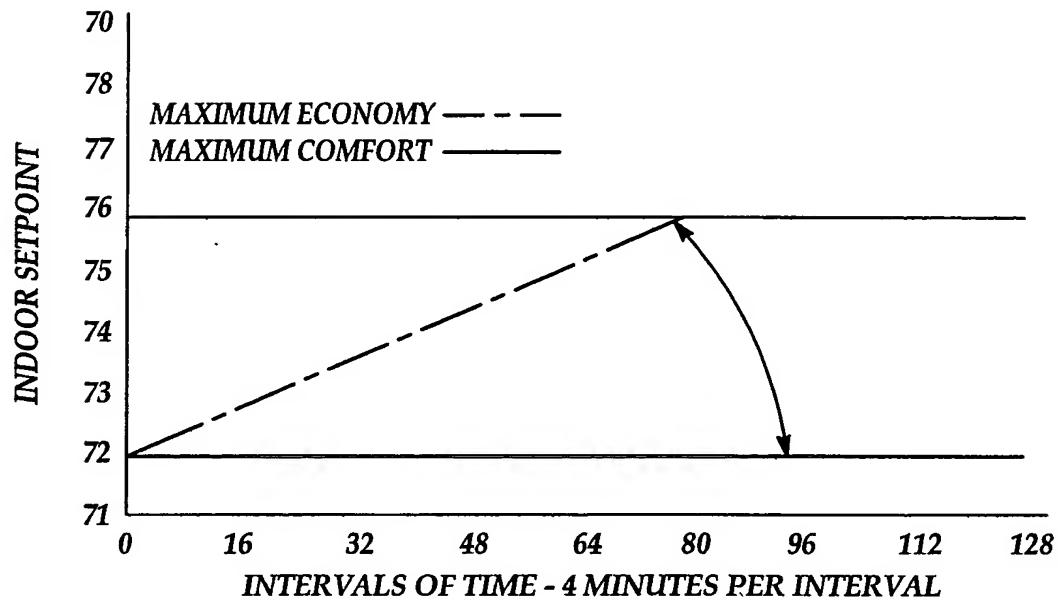


Figure 3F

ECONOMIC AND COMFORT MANAGEMENT & CONTROL EXAMPLE

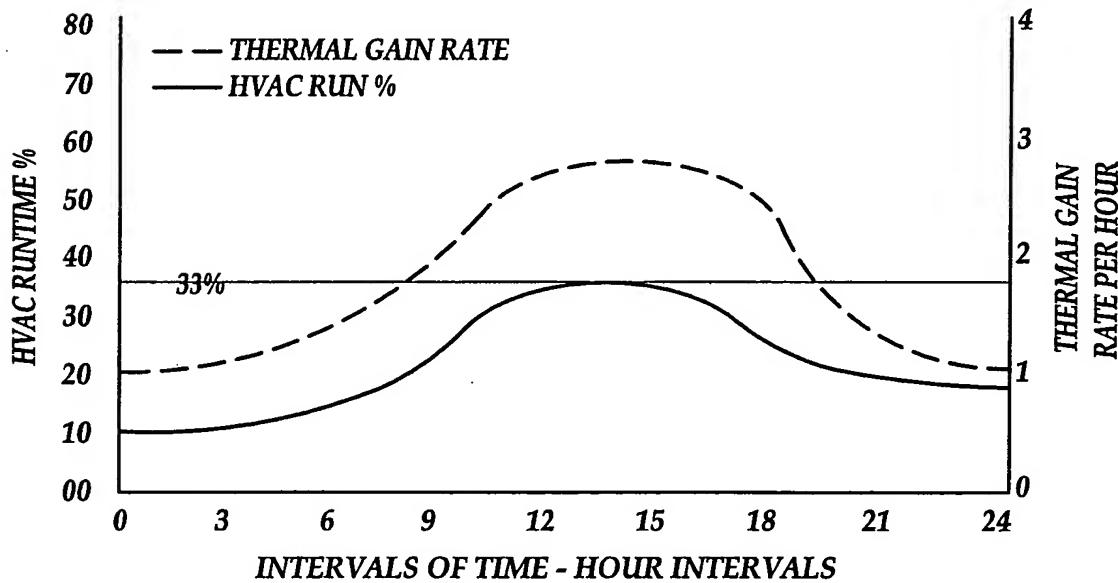


Figure 3G

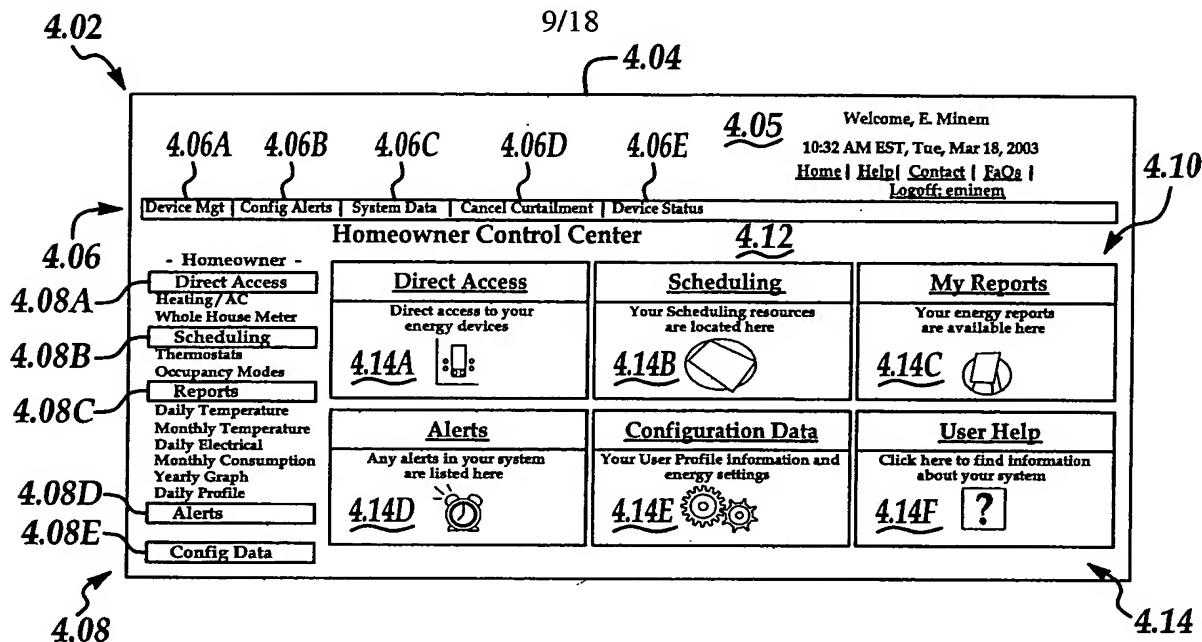


Figure 4A

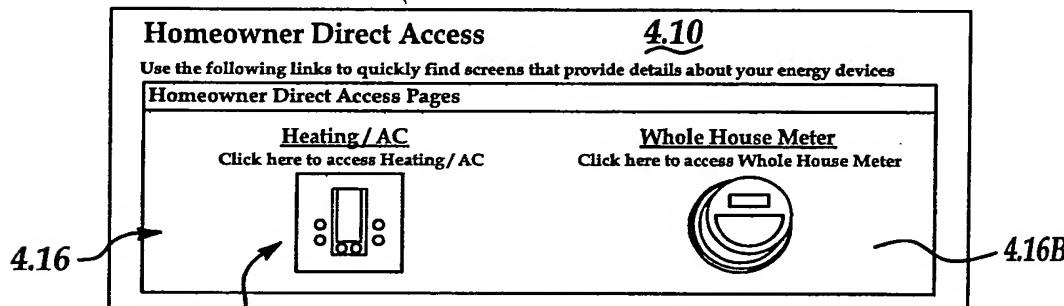


Figure 4B

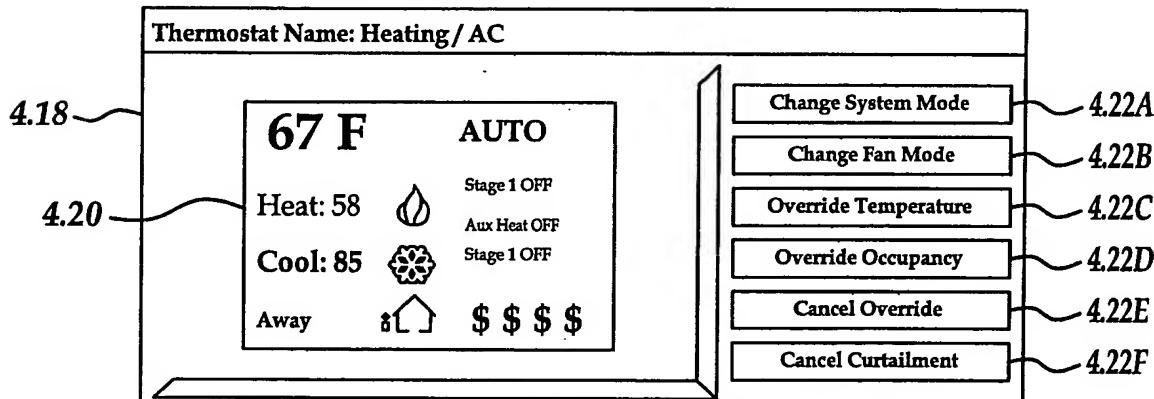


Figure 4C

10/18

4.24 → 4.10 ← 2.26

**Occupancy Modes**

Home	Away	Sleep	Vacant	User1	User2	User3	User4
------	------	-------	--------	-------	-------	-------	-------

When my home is in Home Mode  Active

Use the following settings for the areas controlled by the Heating / AC thermostat

Cooling setpoint: **80** °F use: **Economical Comfo**  **Economy Profile** 4.32

Heating setpoint: **68** °F  My home is normally OCCUPIED during Home mode

Defaults Apply

4.28 ← 4.30 → 2.26

Figure 4D

4.28 → 4.30 ← 2.26

**Occupancy Modes**

Home	Away	Sleep	Vacant	User1	User2	User3	User4
------	------	-------	--------	-------	-------	-------	-------

When my home is in Home Mode  Active

Use the following settings for the areas controlled by the Heating / AC thermostat

Cooling setpoint: **85** °F use: **Economical Comfo**  **Economy Profile** 4.32

Heating setpoint: **58** °F My home is normally OCCUPIED during Away mode

Defaults Apply

4.28 ← 4.30 → 2.26

Figure 4E

2.26 ← 4.32

**Occupancy Modes**

Home	Away	Sleep	Vacant	User1	User2	User3	User4
------	------	-------	--------	-------	-------	-------	-------

When my home is in Home Mode  Active

Use the following settings for the areas controlled by the Heating / AC thermostat

Cooling setpoint: **90** °F use: **Economical Comfo**  **Economy Profile** 4.32

Heating setpoint: **45** °F Maximum Comfort  
Balanced Comfort OCCUPIED during Vacant mode  
Economical Comfort Apply

2.26 ← 4.32

Figure 4F

11/18      4.10

**Thermostat Scheduling**

<<Prev		March			Next>>		March	▼	2003	▼
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday				
						1				
						Weekend				
2	Weekend	3	Weekday	4	Weekday	5	Weekday	6	Weekday	7
						Weekday				Weekend
9	Weekend	10	Weekday	11	Weekday	12	Weekday	13	Weekday	14
						Weekday				Weekend
16	Weekend	17	Weekday	18	Weekday	19	Weekday	20	Weekday	21
						Weekday				Weekend
23	Weekend	24	Weekday	25	Weekday	26	Weekday	27	Weekday	28
						Weekday				Weekend
30	Weekend	31	Weekday							

Figure 4G

**Thermostat Scheduling**

4.38      4.10

Select Thermostat:	Heating/AC	Select Day Type:	Weekday
Start>>	Start at midnight in:	Sleep mode	Click to show instructions
Then at	04:30am	switch to	User1 mode
Then at	05:00am	switch to	User2 mode
Then at	05:30am	switch to	Home mode
Then at	07:30am	switch to	Away mode
Then at	04:00pm	switch to	User2 mode
Then at	05:30pm	switch to	Home mode
Then at	10:00pm	switch to	Sleep mode
<input type="button" value="Apply to 3/18/2003"/>		<input type="button" value="Apply to all Weekdays"/>	<input type="button" value="Back to Calendar..."/>

4.42

Figure 4H

4.44

4.46

Weekday
New Day Type
Weekday
Weekend
Holiday
8/13/2002
2/18/2003

4.40

Figure 4I

12/18

**Configure Alert**

Alerts		Channel		Configurable	Priority	Single/Aggregate
Alert Description	Destination	Primary email	Web Page			
Temperature out of Range	Home Occupant	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	1	Single
Temperature out of Range	Service Provider	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	Single
Gateway Not Responding	Service Provider	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	Single
Temperature out of Range	Energy Provider	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	Single
Gateway Not Responding	Energy Provider	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1	Single
Budget Limit Alarm	Home Occupant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	Single
Device is Malfunctioning	Home Occupant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2	Single
Communication Failure	Home Occupant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3	Single
Ramping Recovery Failure	Home Occupant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12	Single
Duplicate IP address	Service Provider	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12	Single
Temperature out of Range	Energy Provider	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12	Single

Note: You may add the secondary email as another channel by updating personal data. Click here to update account personal data

Submit      Reset

Callouts in Figure 4J:

- 4.48: Points to the 'Alerts' section header.
- 4.50: Points to the 'Submit' button.
- 4.52: Points to the 'User Name' field ('E. Minem').
- 4.54: Points to the 'AccountID' field ('555').
- 4.56: Points to the 'Phone#' field ('5555555555').
- 4.58: Points to the 'Primary/Aggregate' dropdown menu.
- 4.60: Points to the 'Reset' button.
- 4.62: Points to the 'Primary email' column header.
- 4.64: Points to the 'Priority' column header.

Figure 4J

**Reports**

Temperature Reports	Electricity Usage	Cost & Consumption
<a href="#">Daily Temperature</a>  <a href="#">Monthly Temperature</a> 	<a href="#">Daily Electrical</a>  <a href="#">Monthly Consumption</a> 	<a href="#">Yearly Graph</a>  <a href="#">Daily Profile</a> 

Callouts in Figure 4K:

- 4.68A: Points to the 'Temperature Reports' section.
- 4.68B: Points to the 'Electricity Usage' section.
- 4.68C: Points to the 'Cost & Consumption' section.
- 4.68D: Points to the 'Yearly Graph' link in the 'Cost & Consumption' section.
- 4.68E: Points to the 'Monthly Consumption' link in the 'Cost & Consumption' section.
- 4.68F: Points to the 'Daily Profile' link in the 'Cost & Consumption' section.
- 4.68: Points to the 'Temperature Reports' section.

Figure 4K

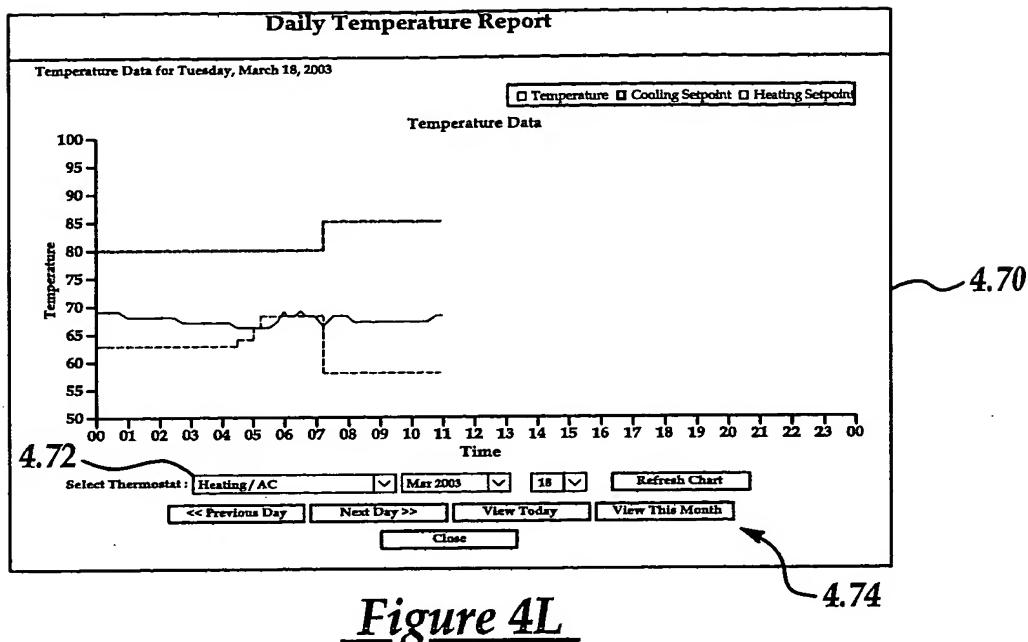


Figure 4L

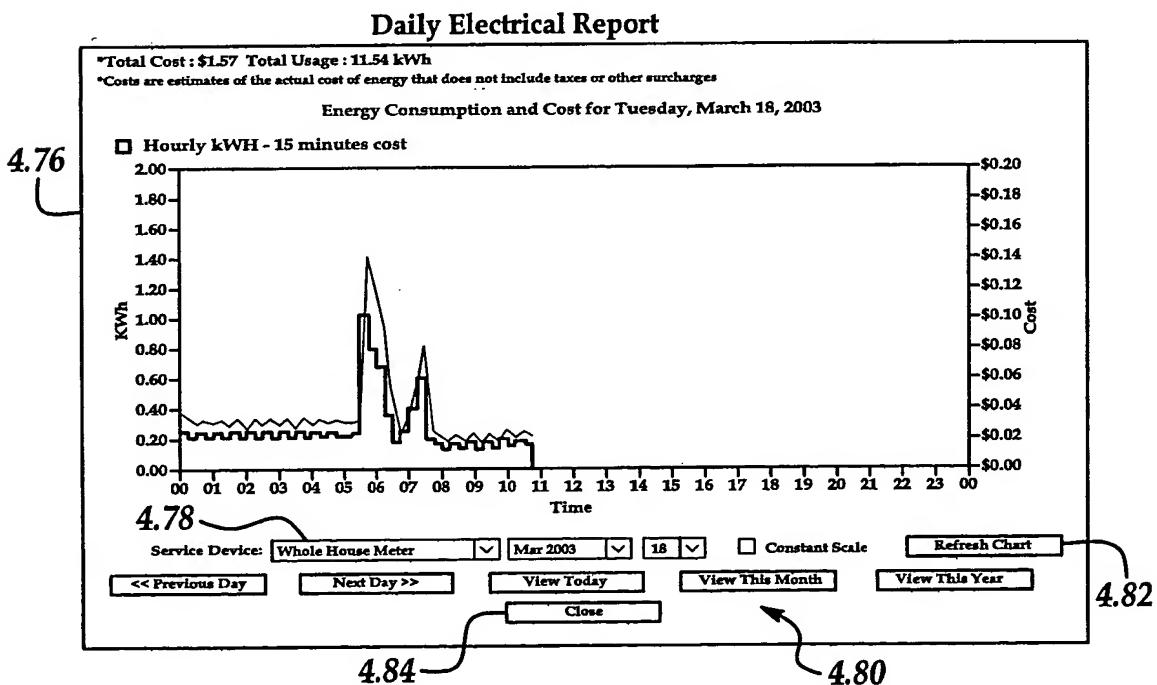
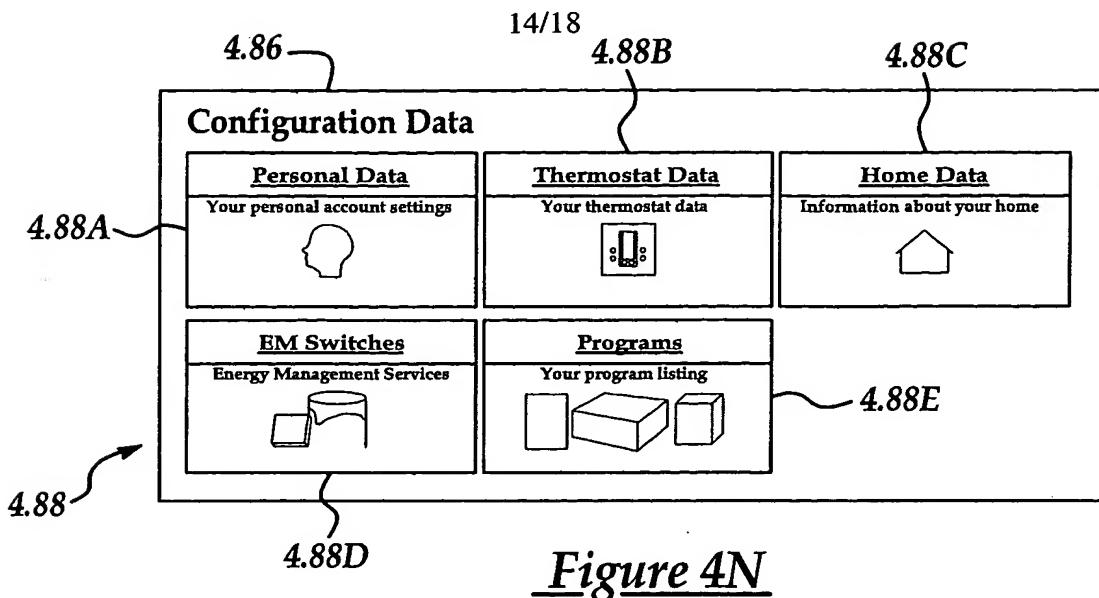


Figure 4M



4.92

The 'Thermostat Data' screen includes the following fields:

- \*Thermostat Name:** Heating / AC
- Thermostat Active:**
- Heating:**
  - Type: Electric w/ Electric Emergency
  - Stages:  1  2
  - Emergency Heating
- Cooling:**
  - Type: Electric Heat Pump
  - Stages:  1  2
- Additional controls:**  Humidifier  Dehumidifier
- Safety Limits:** 95 High 50 Low °F
- Heat Limits:** 75 High 45 Low °F
- Alert Limits:** 90 High 45 Low °F
- Cool Limits:** 90 High 65 Low °F
- Default Limits for Thermostat**
- Buttons:** Thermostat Summary, Apply, Reset

\* = required

Figure 4O

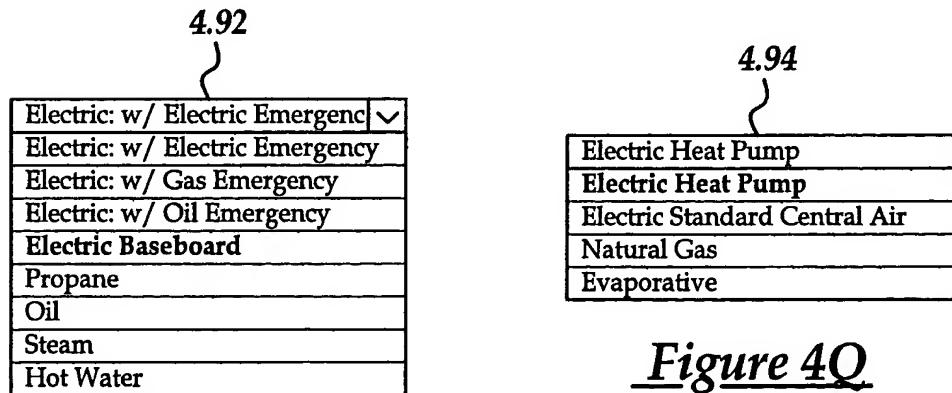


Figure 4P

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## Program Participation

4.96

Program Listing						
Participate	Product Name	Supply Type	Effective Dates From	To	Effective Daily From	To
<input checked="" type="checkbox"/>	Emergency AC Curtailment	On Demand	01/01 - 12/31		12:00am - 11:59pm	
<input checked="" type="checkbox"/>	A Group	On Demand	01/01 - 12/31		12:00am - 11:59pm	
<input type="checkbox"/>	B Group	On Demand	01/01 - 12/31		12:00am - 11:59pm	
<input type="checkbox"/>	Emergency HVAC Curtailment	On Demand	01/01 - 12/31		12:00am - 11:59pm	
<input type="checkbox"/>	Emergency Hot Tub/Spa Curtailment	On Demand	01/01 - 12/31		12:00am - 11:59pm	
<input type="checkbox"/>	Emergency Pool Pump Curtailment	On Demand	01/01 - 12/31		12:00am - 11:59pm	
<input type="checkbox"/>	Emergency Shut Off	On Demand	01/01 - 12/31		12:00am - 11:59pm	
<input type="checkbox"/>	Emergency Water Heater Curtailment	On Demand	01/01 - 12/31		12:00am - 11:59pm	
<input type="checkbox"/>	AfternoonPeaker	Scheduled	04/01 - 10/01		12:00am - 6:00pm	
<input type="checkbox"/>	MorningPeaker	Scheduled	01/01 - 12/31		6:00am - 12:00pm	

Apply

4.100      4.98

Figure 4R

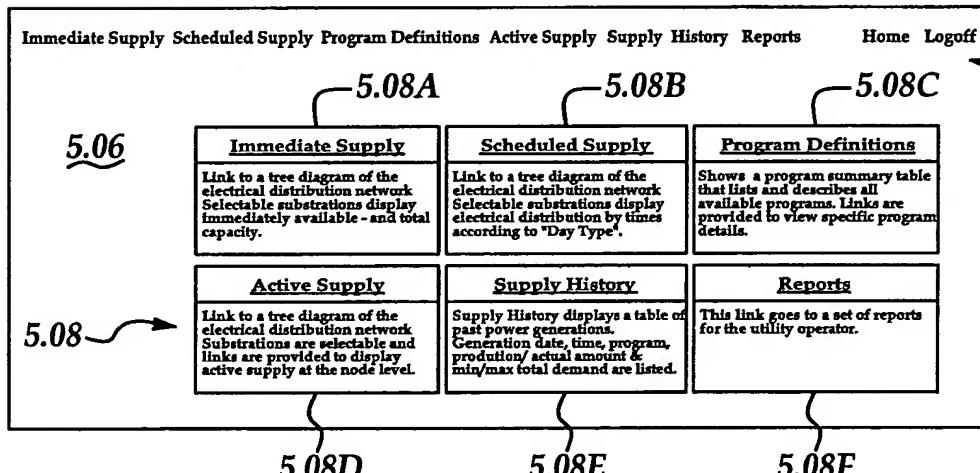
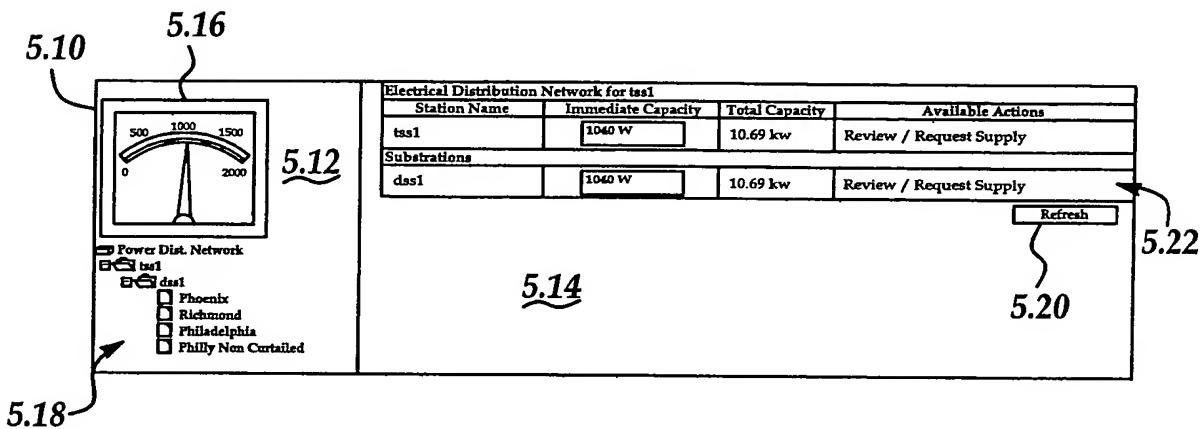


Figure 5A

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5.18

Figure 5B

**Available Program Capacity**

Node Name : Philadelphia

Generate	Program Name	Available Power	Capacity
<input type="checkbox"/>	Emergency HVAC Curtailment	600 W	7193 W
<input type="checkbox"/>	Emergency Shut Off	600 W	7193 W
<input type="checkbox"/>	Emergency Water Heater Curtailment	0 W	515 W
<input type="checkbox"/>	Emergency Pool Pump Curtailment	0 W	209 W
<input type="checkbox"/>	Emergency Hot Tub/Spa Curtailment	N/A	0 W
<input type="checkbox"/>	Emergency AC Curtailment	600 W	7193 W
<input type="checkbox"/>	B Group	600 W	7193 W
<input type="checkbox"/>	A Group	300 W	7193 W

Duration  5.32

Tue Mar 18 2003 14:30

**Submit**   **Close**   **Refresh**

5.24      5.28      5.30  
 5.26      5.32      5.34  
 5.36      5.38

Figure 5C

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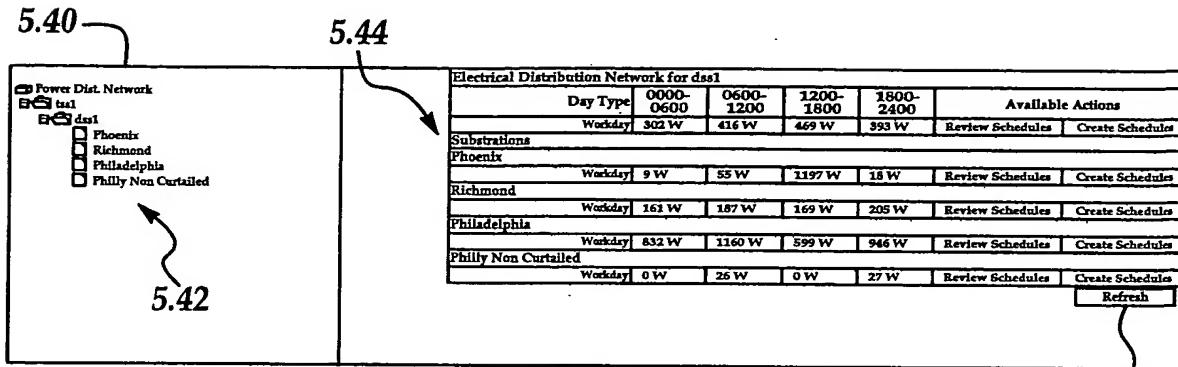


Figure 5D

The figure shows a search form titled 'Find Eligible Programs for: Phoenix'. It includes fields for Date (Month: 3, Day: 18, Year: 2003), Time (Hours: 0, Minutes: 0, To Hours: 1, Minutes: 0), Desired Supply (W), and Schedule Name. There are buttons for Submit, Reset, and Close. An arrow labeled 5.48 points to the title.

Figure 5E

The figure shows a table titled 'Program Summary' with a header 'Click on program name to edit'. It lists various programs under 'Program Name' and their descriptions under 'Description'. The table is divided into sections: 'Immediate Supply' and 'Scheduled Supply'. The 'Immediate Supply' section includes 'A Group' (HVAC Optional and Overrideable), 'B Group' (HVAC Optional and Overrideable), 'Emergency AC Curtailment' (Curtailment of AC systems - Not Overrideable or optional), 'Emergency HVAC Curtailment' (Thermostats Curtailment program - Overrideable and Optional), 'Emergency Hot Tub/Spa Curtailment' (Hot Tub/Spa Curtailment Program), 'Emergency Pool Pump Curtailment' (Pool Pump Curtailment Program), 'Emergency Shut Off' (Emergency program will supply from all devices), and 'Emergency Water Heater Curtailment' (Water Heater Curtailment Program). The 'Scheduled Supply' section includes 'AfternoonPeaker' (This program curtails Waterheater, PoolPumps and HVAC between 12PM to 4PM) and 'MorningPeaker' (Shutdown WaterHeaters and Pool pumps between 6AM and 12 PM). A 'New' button is at the bottom.

Figure 5F

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Program Definitions

Program Name:

Description:

Supply Type:  On Demand  Scheduled 5.62

Available Time: From: HH  MM  To: HH  MM  5.56

Available Dates: From: MM  DD  To: MM  DD  5.64

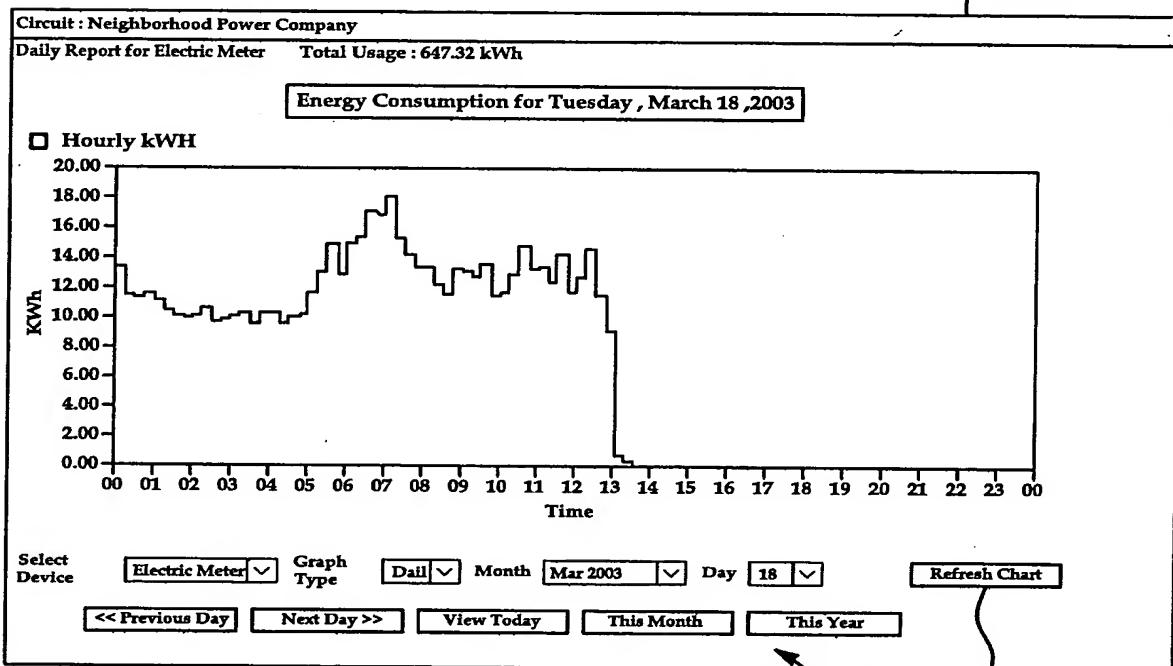
Optional 5.66

Overrideable 5.64

Device Types To Include:  HVAC/TSTAT  Water Heater  Pool Pump  Hot Tub/Spa 5.68

5.70      5.72      Figure 5G      5.74

5.76



Electric Meter	<input type="button" value="▼"/>
Thermostat	
Electric Meter	
Water Heater	
<b>Pool Pump</b>	
Hot Tub/Spa	

Figure 5I